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=> File .Biotech
=> s (whey(l)protein#)
L1      27585 (WHEY(L) PROTEIN#)

=> s l1 and(casein#(l)glycomacropeptide or glycomacro peptide or glyco macropeptide
or GMP)
L2      307 L1 AND(CASEIN#(L) GLYCOMACROPEPTIDE OR GLYCOMACRO PEPTIDE OR
        GLYCO MACROPEPTIDE OR GMP)

=> s l2 and (produc? or prepar? or mak?)
L3      271 L2 AND (PRODUC? OR PREPAR? OR MAK?)

=> s l3 and (purif? or remov? fat or delipid?)
L4      138 L3 AND (PURIF? OR REMOV? FAT OR DELIPID?)

=> s l4 and (remov?(l)whey protein or deprotein? whey or DPW)
L5      39 L4 AND (REMOV?(L) WHEY PROTEIN OR DEPROTEIN? WHEY OR DPW)

=> s l5 and (ion exchang? or chromatog? or resin#)
L6      30 L5 AND (ION EXCHANG? OR CHROMATOG? OR RESIN#)

=> s l6 and (microfiltrat? or micro filtrat? or diafiltrat?)
L7      21 L6 AND (MICROFILTRAT? OR MICRO FILTRAT? OR DIAFILTRAT?)

=> s l7 and (remov? lactose or peptide# or minerals)
L8      18 L7 AND (REMOV? LACTOSE OR PEPTIDE# OR MINERALS)

=> s l8 and (concentrat? or dry? or centrifug? or precipitat? or aggregat?)
L9      18 L8 AND (CONCENTRAT? OR DRY? OR CENTRIFUG? OR PRECIPITAT? OR
        AGGREGAT?)

=> s l9 and (bovine whey protein#)
L10     1 L9 AND (BOVINE WHEY PROTEIN#)

=> d l1 bib ab

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L1  ANSWER 1 OF 27585      MEDLINE on STN
AN  2004267889      IN-PROCESS
DN  PubMed ID: 15168035
TI  Gastric emptying, gastric secretion and enterogastrone response after
    administration of milk proteins or their peptide hydrolysates in humans.
AU  Calbet Jose A L; Holst Jens J
CS  Copenhagen Muscle Research Center, Rigshospitalet, Copenhagen, Denmark,.
    lopezcalbet@terra.es
SO  European journal of nutrition, (2004 Jun) 43 (3) 127-39.
    Journal code: 100888704. ISSN: 1436-6207.
CY  Germany: Germany, Federal Republic of
DT  Journal; Article; (JOURNAL ARTICLE)
LA  English
FS  IN-DATA-REVIEW; IN-PROCESS; NONINDEXED; Priority Journals
ED  Entered STN: 20040529
    Last Updated on STN: 20040529
AB  BACKGROUND: The influence of protein fractionation on gastric
    emptying and rate of appearance of their constituent amino acids in
    peripheral blood remains unknown. AIM OF THE STUDY: To examine the
    influence of the degree of protein fractionation on gastric
    emptying, gastric secretion, amino acid absorption and enterogastrone
    response, after the intragastric administration of complete cow milk
    proteins or their respective peptide hydrolysates in man.
    METHODS: Six healthy males were randomized to receive one of the following
    four solutions: whey whole protein (W), casein whole
    protein (C), whey peptide hydrolysate (WHY) or casein
    hydrolysate (CAHY). All solutions were matched for volume (600 mL),
    nitrogen content (9.3 g/L), energy density (1069-1092 kJ/L), osmolality
    (288-306 mosmol/kg), pH (6.9-7.0) and temperature (37 degrees C).

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RESULTS: Solutions were emptied at similar rates, with mean half-times of (mean +/- SEM) 21.4 +/- 1.3, 19.3 +/- 2.2, 18.0 +/- 2.5 and 19.4 +/- 2.8 min, for the WHY, CAHY, C and W, respectively. The rates of intestinal absorption of water and amino acids were similar with the exception of the casein **protein** solution, for which the speed of intestinal amino acid absorption was slower ( p < 0.05). The peptide hydrolysates elicited about 50% more gastric secretion than the whole **protein** solutions ( p < 0.05), which was accompanied by higher glucosedependent insulinotropic polipeptide (GIP) plasma levels during the first 20 min of the gastric emptying process. Similar glucagon-like peptide-1 (GLP-1) and peptide YY (PYY) plasma responses were elicited by the four solutions.

CONCLUSIONS: The rate of gastric emptying and the plasma GLP-1 and PYY responses to feeding with cow milk **protein** solutions in humans are independent of the degree of **protein** fractionation and are not altered by small differences in the amino acid composition or **protein** solubility. In contrast, the GIP response is accentuated when milk **proteins** are delivered as peptide hydrolysates.

=> s 19 and (bovine kappa casein glycomacropeptide#)

L11 0 L9 AND (BOVINE KAPPA CASEIN GLYCOMACROPEPTIDE#)

=> s 19 and (bovine kappa casein#)

L12 1 L9 AND (BOVINE KAPPA CASEIN#)

=> d l12 bib ab

L12 ANSWER 1 OF 1 USPATFULL on STN

AN 2002:323318 USPATFULL

TI Large scale **production** of low fat and SDS gel pure kappa-casein glycomacropeptides (**GMP**) from bovine **deproteinized whey**

IN Davis, Martin E., Tonka Bay, MN, UNITED STATES  
Ming, Fang, Madison Lake, MN, UNITED STATES  
Su, Sharyn X., Plymouth, MN, UNITED STATES  
Yang, Mengyan, Le Sueur, MN, UNITED STATES  
Ichinomiya, Akimoto, Tokushima, JAPAN

PI US 2002183489 A1 20021205

AI US 2002-99612 A1 20020314 (10)

PRAI US 2001-275878P 20010314 (60)

DT Utility

FS APPLICATION

LREP WARE FRESSOLA VAN DER SLUYS &, ADOLPHSON, LLP, BRADFORD GREEN BUILDING  
5, 755 MAIN STREET, P O BOX 224, MONROE, CT, 06468

CLMN Number of Claims: 6

ECL Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 330

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The **production** of **GMP** in suitable quantities and of suitable quality for supply to the food, pharmaceutical, cosmetic, and other industries, is provided. The overall cheese **making** is made more efficient by recovering valuable kappa-casein glycomacropeptides from **whey** in a manner that permits most **whey protein** to be separated from the **whey** prior to **concentrating** and recovering glycomacropeptides from bovine **whey**. The invention provides procedures working on **concentrated** micro-filtered **deproteinized whey protein** (MFDPW) and obtaining a **purified** residue which can be dried.

=> s 19 and (SDS Gel Purity or SDS electrophores?)

L13 2 L9 AND (SDS GEL PURITY OR SDS ELECTROPHORES?)

=> d 113 1-2 bib ab

L13 ANSWER 1 OF 2 USPATFULL on STN  
AN 2002:323318 USPATFULL  
TI Large scale **production** of low fat and SDS gel pure  
kappa-casein glycomacropeptides (**GMP**) from bovine  
**deproteinized whey**  
IN Davis, Martin E., Tonka Bay, MN, UNITED STATES  
Ming, Fang, Madison Lake, MN, UNITED STATES  
Su, Sharyn X., Plymouth, MN, UNITED STATES  
Yang, Mengyan, Le Sueur, MN, UNITED STATES  
Ichinomiya, Akimoto, Tokushima, JAPAN  
PI US 2002183489 A1 20021205  
AI US 2002-99612 A1 20020314 (10)  
PRAI US 2001-275878P 20010314 (60)  
DT Utility  
FS APPLICATION  
LREP WARE FRESSOLA VAN DER SLUYS &, ADOLPHSON, LLP, BRADFORD GREEN BUILDING  
5, 755 MAIN STREET, P O BOX 224, MONROE, CT, 06468  
CLMN Number of Claims: 6  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Page(s)  
LN.CNT 330

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The **production** of **GMP** in suitable quantities and of  
suitable quality for supply to the food, pharmaceutical, cosmetic, and  
other industries, is provided. The overall cheese **making** is  
made more efficient by recovering valuable kappa-casein  
glycomacropeptides from **whey** in a manner that permits most  
**whey protein** to be separated from the **whey**  
prior to **concentrating** and recovering glycomacropeptides from  
bovine **whey**. The invention provides procedures working on  
**concentrated** micro-filtered **deproteinized whey**  
**protein** (MFDPW) and obtaining a **purified** residue which  
can be dried.

L13 ANSWER 2 OF 2 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN  
AN 2002-750533 [81] WPIDS  
DNC C2002-212704  
TI **Preparation** of glycomacropeptides from bovine whey involves  
contacting acidified, **concentrated deproteinized**  
**whey** with ion exchange resin,  
neutralizing the resin effluent, and subjecting to  
**microfiltration** and **diafiltration**.  
DC B04 D13  
IN DAVIS, M E; ICHINOMIYA, A; MING, F; SU, S X; YANG, M  
PA (DAVI-I) DAVIS M E; (ICHI-I) ICHINOMIYA A; (MING-I) MING F; (SUSX-I) SU S  
X; (YANG-I) YANG M; (DAVI-N) DAVISCO FOODS INT INC  
CYC 100  
PI WO 2002074790 A1 20020926 (200281)\* EN 17  
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
NL OA PT SD SE SL SZ TR TZ UG ZM ZW  
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT  
RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM  
ZW  
US 2002183489 A1 20021205 (200301)  
AU 2002336247 A1 20021003 (200432)  
ADT WO 2002074790 A1 WO 2002-US7979 20020314; US 2002183489 A1 Provisional US  
2001-275878P 20010314, US 2002-99612 20020314; AU 2002336247 A1 AU  
2002-336247 20020314  
FDT AU 2002336247 A1 Based on WO 2002074790  
PRAI US 2001-275878P 20010314; US 2002-99612 20020314  
AB WO 200274790 A UPAB: 20021216

NOVELTY - Glycomacropeptides are prepared from bovine whey by removing fat, whey protein and aggregated proteins from bovine whey to produce a deproteinized whey (DPW). The DPW is then concentrated, acidified, and contacted with an ion exchange resin. The resulting resin effluent is neutralized, subjected to microfiltration and then to diafiltration, concentrated, and then dried.

DETAILED DESCRIPTION - Preparation of glycomacropeptides (GMP) from bovine whey involves processing bovine whey to remove fat, whey protein and aggregated proteins to produce DPW. The DPW is then concentrated, acidified, and then contacted with an ion exchange resin to remove non-GMP peptides and proteins to obtain a resin effluent. The resin effluent is neutralized and then subjected to microfiltration to remove aggregated protein and fat. The resin effluent is further subjected to diafiltration to remove lactose, small peptides and minerals to provide a purified resin effluent which is then concentrated and dried.

USE - The invention is used for preparing glycomacropeptides, particularly kappa-casein GMP, from bovine whey. The GMP obtained can be utilized as an ingredient for e.g., foods, pharmaceuticals, and cosmetics.

ADVANTAGE - The inventive method is enable production of high quality GMP in large quantity.  
Dwg.2/3

=> Dup rem 19

PROCESSING COMPLETED FOR L9

L14 18 DUP REM L9 (0 DUPLICATES REMOVED)

=> d l14 1-18 bib ab

L14 ANSWER 1 OF 18 USPATFULL on STN

AN 2004:69633 USPATFULL

TI Bone health compositions derived from milk

IN Reid, Ian Reginald, Mount Albert, NEW ZEALAND

Cornish, Jillian, Newmarket, NEW ZEALAND

Haggarty, Neill Ward, Palmerston North, NEW ZEALAND

Palmano, Kay Patricia, Palmerston North, NEW ZEALAND

PI US 2004052860 A1 20040318

AI US 2003-398628 A1 20031010 (10)

WO 2001-NZ200 20010927

PRAI NZ 2000-507335 20001005

DT Utility

FS APPLICATION

LREP KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR,  
IRVINE, CA, 92614

CLMN Number of Claims: 41

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 854

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to bone health compositions comprising an acidic protein fraction of milk, to a method of producing said bone health composition, to methods of treatment comprising said bone health compositions and to medicinal uses of said bone health compositions. One broad aspect of the invention provides a bone health composition comprising an acidic protein fraction derived from milk, from a component of milk, from whey, from hydrolysates

thereof, or from a combination thereof, or from a combination thereof wherein the composition does not comprise caseinoglycomacropeptide (CGMP). Another broad aspect provides a method of manufacturing the composition of the invention using anion exchange **chromatography**

L14 ANSWER 2 OF 18 USPATFULL on STN

AN 2004:63429 USPATFULL

TI Method of **preparing** a milk polar lipid and a sphingolipid enriched **concentrate**

IN Bloomer, Scott, Bloomington, MN, UNITED STATES

Brody, Ernest P., Minneapolis, MN, UNITED STATES

PI US 2004047947 A1 20040311

AI US 2003-372048 A1 20030221 (10)

PRAI US 2002-358736P 20020221 (60)

DT Utility

FS APPLICATION

LREP KINNEY & LANGE, P.A., THE KINNEY & LANGE BUILDING, 312 SOUTH THIRD STREET, MINNEAPOLIS, MN, 55415-1002

CLMN Number of Claims: 58

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 5147

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of processing a composition that includes proteins and lipids, the method including transforming at least some of the proteins and at least some of the lipids originally present in the composition into protein residuals and lipid residuals and **concentrating** sphingolipids in a fraction following the transformation.

L14 ANSWER 3 OF 18 USPATFULL on STN

AN 2004:12743 USPATFULL

TI Method of **preparing** a milk polar lipid enriched **concentrate** and a sphingolipid enriched **concentrate**

IN Brody, Ernest P., Minneapolis, MN, UNITED STATES

PI US 2004009261 A1 20040115

AI US 2003-373420 A1 20030221 (10)

PRAI US 2002-358736P 20020221 (60)

DT Utility

FS APPLICATION

LREP KINNEY & LANGE, P.A., THE KINNEY & LANGE BUILDING, 312 SOUTH THIRD STREET, MINNEAPOLIS, MN, 55415-1002

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 5056

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of processing a dairy composition that includes a plurality of proteins, the method entailing combining an enzymatic substance with the dairy composition to form a mixture that includes an enzyme of fungal origin, and enzymatically hydrolyzing proteins present in the mixture during an enzymatic hydrolysis period of at least about two hours to **produce a product**, the **product** having a degree of protein hydrolysis greater than 30 percent.

L14 ANSWER 4 OF 18 USPATFULL on STN

AN 2003:238708 USPATFULL

TI Method of processing a proteinaceous material to recover K-casein macropeptide and polymers of a-lactalbumin and B-lactoglobulin

IN Brody, Ernest P., Minneapolis, MN, UNITED STATES

PA Land O' Lakes, Inc., Arden Hills, MN, UNITED STATES, 55112 (U.S. corporation)

PI US 2003166866 A1 20030904

AI US 2002-58907 A1 20020128 (10)

DT Utility

FS APPLICATION

LREP KINNEY & LANGE, P.A., THE KINNEY & LANGE BUILDING, 312 SOUTH THIRD STREET, MINNEAPOLIS, MN, 55415-1002

CLMN Number of Claims: 60

ECL Exemplary Claim: 1

DRWN 23 Drawing Page(s)

LN.CNT 4272

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of processing a proteinaceous material that includes  $\kappa$ -casein macropeptide, the method entailing polymerizing protein present in the proteinaceous material to yield a proteinaceous intermediate, where the proteinaceous intermediate includes polymerized protein, and separating the proteinaceous intermediate to yield a first portion and a second portion, where the first portion includes a majority of the  $\kappa$ -casein macropeptide from the proteinaceous material and the second portion includes a majority of the polymerized protein from the proteinaceous intermediate.

L14 ANSWER 5 OF 18 USPATFULL on STN

AN 2003:181691 USPATFULL

TI Process for separation of **whey proteins** using a novel anion exchanger

IN Ayers, John Stephen, Palmerston North, NEW ZEALAND

Elgar, David Francis, Palmerston, NEW ZEALAND

Palmano, Kay Patricia, Palmerston North, NEW ZEALAND

Pritchard, Mark, Palmerston North, NEW ZEALAND

Bhaskar, Ganugapti Bijaya, Palmerston North, NEW ZEALAND

PI US 2003125525 A1 20030703

AI US 2002-149339 A1 20021122 (10)

WO 2000-NZ245 20001208

PRAI NZ 1999-501644 19991208

NZ 2000-505071 20000609

DT Utility

FS APPLICATION

LREP KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614

CLMN Number of Claims: 31

ECL Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 1050

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides new processes useful for separating **whey proteins** from **whey protein** -containing solutions using a novel anion exchanger which comprises a water insoluble, hydrophilic, water swellable, hydroxy (C.sub.2-C.sub.4) alkylated and cross-linked regenerated cellulose, derivatised with quaternary amino (QA) groups, wherein the level of substitution of the QA groups is 1.4 milli-equivalents per **dry** gram of anion exchanger (meq/g) or greater.

L14 ANSWER 6 OF 18 USPATFULL on STN

AN 2003:85907 USPATFULL

TI Method and apparatus for separation of milk, colostrum, and whey

IN Kopf, Henry B., Cary, NC, UNITED STATES

Kopf, Henry, III, Cary, NC, UNITED STATES

PI, US 2003059512 A1 20030327

AI US 2001-950096 A1 20010910 (9)

DT Utility

FS APPLICATION

LREP INTELLECTUAL PROPERTY / TECHNOLOGY LAW, PO BOX 14329, RESEARCH TRIANGLE PARK, NC, 27709

CLMN Number of Claims: 82

ECL Exemplary Claim: 1

DRWN 14 Drawing Page(s)

LN.CNT 2063

AB Apparatus and method for separation of milk and milk **products**, e.g., involving sequential separation of milk, clostrum, and whey components by cross-flow filtration. The apparatus and method in a preferred aspect employ cross-flow filtration, **chromatography** and fermentation to separate and fully utilize the components of milk, clostrum, and whey to generate numerous individual components, minimize waste, lower adverse environmental issues and provide enhanced economic benefits to dairy **producers**. A wide variety of consumer and nutraceutical **products** can be **produced** from the fractions and/or sub-fractions of milk **products** obtained from such separation. The invention further contemplates a methodology for selecting optimum membrane, device, and operating conditions to achieve a desired separation.

L14 ANSWER 7 OF 18 USPATFULL on STN

AN 2003:65553 USPATFULL

TI Isolation of glycoproteins from bovine milk

IN Davis, Martin E., Tonka Bay, MN, UNITED STATES

Ming, Fang, Madison Lake, MN, UNITED STATES

Yang, Mengyan, Le Sueur, MN, UNITED STATES

Su, Sharyn X., Plymouth, MN, UNITED STATES

Ichinomiya, Akimoto, Tokushima, JAPAN

Melachouris, Nicholas, Laguna Niguel, CA, UNITED STATES

PI US 2003045677 A1 20030306

AI US 2002-116968 A1 20020405 (10)

PRAI US 2001-281816P 20010405 (60)

DT Utility

FS APPLICATION

LREP Schwegman, Lundberg, Woessner & Kluth, P. A., P. O. Box 2938, Minneapolis, MN, 55402

CLMN Number of Claims: 18

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 468

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process isolates and recovers glycoprotein fractions in **dry** or solution form. Glycoproteins are recovered from **deproteinized whey**, preferably micro-filtered to **remove** large molecules and **aggregates**. The resulting retentate is then diluted for further processing. The resulting liquid is heated to coagulate **whey protein** and then cooled sufficiently to **precipitate** coagulated **whey protein**. The **preparation** can then be completed by **centrifuging** the resulting cooled solution and separating resulting supernatant containing glycoproteins from fat and **precipitate**. The **product** glycoprotein **concentrate** can be dried, such as by freeze **drying**, or recovered and stored in liquid form. In a preferred aspect, saline is employed to dilute the microfiltered **concentrate** prior to heating to improve the recovery of a liquid glycoprotein fraction that can be sterilized, such as by autoclaving. In another aspect, glycoprotein free of a majority of glycomacropetides ( **GMP**) can be recovered by adjusting the solution to alkaline pH and subjecting to **ion exchange** extraction. Preferred liquid **products** are stable to autoclaving and free of separation after storage in a sealed container at 20° C. for a period of at least one month.

L14 ANSWER 8 OF 18 USPATFULL on STN

AN 2003:115900 USPATFULL

TI Process for isolating glycomacropetide from dairy **products** with a phenylalanine impurity of 0.5% w/w

IN Ayers, John Stephen, Palmerston North, NEW ZEALAND

Coolbear, Kay Patricia, Palmerston North, NEW ZEALAND

Elgar, David Francis, Palmerston North, NEW ZEALAND

Pritchard, Mark, Fitzherbert West Palmerston North, NEW ZEALAND

PI US 6555659 B1 20030429  
AI US 2000-625043 20000724 (9)  
RLI Continuation of Ser. No. US 269918, now abandoned  
PRAI NZ 1996-299483 19961001  
DT Utility  
FS GRANTED  
EXNAM Primary Examiner: Low, Christopher S. F.; Assistant Examiner: Mohamed, Abdel A.  
LREP Knobbe, Martens, Olson & Bear, LLP  
CLMN Number of Claims: 43  
ECL Exemplary Claim: 1  
DRWN 4 Drawing Figure(s); 3 Drawing Page(s)  
LN.CNT 1130  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is related to a method for the **purification** of glycomacropeptide (**GMP**) with an amino acid composition containing no greater than 0.5% (w/w) phenylalanine, comprising the steps of contacting a **GMP**-containing feedstock with a first anion exchanger under conditions to adsorb the **GMP**, eluting the adsorbed **GMP** from the anion exchanger and removing impurities from the **GMP**-containing eluate by either:  
(i) contacting the **GMP**-containing eluate with a cation exchanger in conditions under which the impurities in the eluate are adsorbed onto the cation exchanger, or (ii) **precipitating** the impurities in **GMP**-containing eluate using conditions in which the **GMP** remains in solution, or (iii) contacting the **GMP**-containing eluate with a second anion exchanger in conditions under which the impurities in the eluate are adsorbed onto the anion exchanger, and recovering the **GMP** from whichever one or more of the steps (i), (ii) or (iii) was used.

L14 ANSWER 9 OF 18 USPTAFULL on STN

AN 2002:323318 USPTAFULL

TI Large scale **production** of low fat and SDS gel pure kappa-casein glycomacropeptides (**GMP**) from bovine **deproteinized whey**

IN Davis, Martin E., Tonka Bay, MN, UNITED STATES  
Ming, Fang, Madison Lake, MN, UNITED STATES  
Su, Sharyn X., Plymouth, MN, UNITED STATES  
Yang, Mengyan, Le Sueur, MN, UNITED STATES  
Ichinomiya, Akimoto, Tokushima, JAPAN

PI US 2002183489 A1 20021205

AI US 2002-99612 A1 20020314 (10)

PRAI US 2001-275878P 20010314 (60)

DT Utility

FS APPLICATION

LREP WARE FRESSOLA VAN DER SLUYS &, ADOLPHSON, LLP, BRADFORD GREEN BUILDING  
5, 755 MAIN STREET, P O BOX 224, MONROE, CT, 06468

CLMN Number of Claims: 6

ECL Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 330

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The **production** of **GMP** in suitable quantities and of suitable quality for supply to the food, pharmaceutical, cosmetic, and other industries, is provided. The overall cheese **making** is made more efficient by recovering valuable kappa-casein glycomacropeptides from **whey** in a manner that permits most **whey protein** to be separated from the **whey** prior to **concentrating** and recovering glycomacropeptides from bovine **whey**. The invention provides procedures working on **concentrated** micro-filtered **deproteinized whey protein** (MFDPW) and obtaining a **purified** residue which can be dried.



L14 ANSWER 10 OF 18 USPATFULL on STN

AN 2002:272874 USPATFULL

TI Methods for **producing** sialyloligosaccharides in a dairy source

IN Pelletier, Marc, Doylestown, PA, UNITED STATES

Barker, William A., West Chester, PA, UNITED STATES

Hakes, David J., Willow Grove, PA, UNITED STATES

Zopf, David A., Strafford, PA, UNITED STATES

PA Neose Technologies, Inc. (U.S. corporation)

PI US 2002150995 A1 20021017

US 6706497 B2 20040316

AI US 2001-955909 A1 20010918 (9)

RLI Continuation of Ser. No. US 1997-911393, filed on 14 Aug 1997, GRANTED,  
Pat. No. US 6323008

DT Utility

FS APPLICATION

LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA,  
19103-2921

CLMN Number of Claims: 46

ECL Exemplary Claim: 1

DRWN 10 Drawing Page(s)

LN.CNT 2720

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides methods for **producing** sialyloligosaccharides in situ in dairy sources and cheese processing waste streams, prior to, during, or after processing of the dairy source during the cheese manufacturing process. The methods of the present invention use the catalytic activity of  $\alpha(2-3)$  trans-sialidases to exploit the high **concentrations** of lactose and  $\alpha(2-3)$  sialosides which naturally occur in dairy sources and cheese processing waste streams to drive the enzymatic synthesis of  $\alpha(2-3)$  sialyllactose.  $\alpha(2-3)$  sialyloligosaccharides **produced** according to these methods are additionally encompassed by the present invention. The invention also provides for recovery of the sialyloligosaccharides **produced** by these methods. The invention further provides a method for **producing**  $\alpha(2-3)$  sialyllactose. The invention additionally provides a method of enriching for  $\alpha(2-3)$  sialyllactose in milk using transgenic mammals that express an  $\alpha(2-3)$  trans-sialidase transgene. The invention also provides for recovery of the sialyllactose contained in the milk **produced** by this transgenic mammal either before or after processing of the milk. Transgenic mammals containing an  $\alpha(2-3)$  trans-sialidase encoding sequence operably linked to a regulatory sequence of a gene expressed in mammary tissue are also provided by the invention.

L14 ANSWER 11 OF 18 USPATFULL on STN

AN 2002:122455 USPATFULL

TI **Peptide** mixture and **products** thereof

IN Shimamura, Seiichi, Kanagawa, JAPAN

Tamura, Yoshitaka, Kanagawa, JAPAN

Miyakawa, Hiroshi, Kanagawa, JAPAN

Saito, Hitoshi, Kanagawa, JAPAN

Kawaguchi, Yasushi, Kanagawa, JAPAN

Isomura, Naoko, Kanagawa, JAPAN

Akazome, Yoko, Kanagawa, JAPAN

Ochi, Hiroshi, Kanagawa, JAPAN

Kawamoto, Mihoko, Kanagawa, JAPAN

PA Morinaga Milk Industry Co., Ltd., Tokyo, JAPAN (non-U.S. corporation)

PI US 6395508 B1 20020528

AI US 1999-316957 19990524 (9)

RLI Continuation of Ser. No. US 817095, now patented, Pat. No. US 5952193

PRAI JP 1994-274303 19941014

JP 1994-274304 19941014

JP 1994-305635 19941115

DT Utility

FS GRANTED  
EXNAM Primary Examiner: Borin, Michael  
LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.  
CLMN Number of Claims: 9  
ECL Exemplary Claim: 1  
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)  
LN.CNT 1998

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for **producing** a **peptide** mixture from a starting protein by (1) adding at least one protease to an aqueous solution of at least one starting protein to hydrolyse the starting protein, (2) measuring the amount of a free amino acid selected from the group consisting of lysine, phenylalanine, leucine and arginine **produced** during the hydrolysis of the starting protein, (3) calculating the amount of the free amino acid with respect to the total amount of amino acid contained in the starting protein, and (4) terminating the hydrolysis when the calculated amount of the free amino acid with respect to the total amount of the amino acid contained in the starting protein falls within a predetermined range. The inventive method provides a starting protein hydrolysate of uniform and consistent quality.

---Logging off of STN---

=>  
Executing the logoff script...

=> LOG Y

STN INTERNATIONAL LOGOFF AT 14:16:30 ON 31 MAY 2004